

ABSTRACT

[146] In a transceiver system a passband single carrier transmitter is coupled to a first ultra-wide-band wireless transmission channel and a receiver may be coupled to the ultra-wide-band wireless transmission channel. The receiver may receive signals transmitted by the passband single carrier transmitter over the ultra-wide-band wireless transmission channel at a baud rate less than or equal to half of a spectral bandwidth of the signal transmitted by the passband single carrier transmitter. A passband single carrier transmitter may transmit a symbol stream via lossy ultra-wide-band wireless transmission channel at an adaptively chosen baud rate that is based on the lossy ultra-wide-band wireless transmission channel. The adaptively chosen baud rate may vary over a range that includes baud rates less than or equal to half of a spectral bandwidth of the transmitted symbol stream. A receiver may receive the transmitted symbol stream from the lossy ultra-wide-band wireless transmission channel.